

ABSTRACT OF THE DISCLOSURE

A mobile station is disclosed for performing an automatic frequency control based on a correspondence of a frequency error and TCXO control voltage to a base station. A plurality of frequency error measuring units each measure a frequency error between an internal clock signal and a clock signal in a specified base station. A plurality of control voltage calculators, each associated with a corresponding one of the plurality of frequency error measuring units, integrate a frequency error measured by the corresponding frequency error measuring unit to produce a control voltage. A control voltage selector selects a control voltage corresponding to a base station currently in communication with the mobile station from among control voltages calculated by the plurality of control voltage calculators. A clock signal generator generates an internal clock signal at a frequency in accordance with the selected control voltage. A memory has stored therein a set of a scramble code of each base station corresponding to a frequency error measured by a frequency error measuring unit corresponding to the base station, and a control voltage selected by the control voltage selector. Later, when the mobile station switches a base station unitized for the frequency control (hand-over), a frequency error and TCXO control voltage corresponding to a scramble code (or identification ID) of a base station, to which the mobile station is newly connected for communication, are read from the memory, when the scramble code is stored in the memory, for utilizing in the frequency control.